



P/56-7 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Roger Hoffman

Serial No.: 09/516,648

Examiner: K. Kruer

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Art Unit: 1773

For: COMPOSITE PAPERBOARDS AND
METHODS OF MAKING COMPOSITE
PAPERBOARDS

Dated: 2/10/05

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

APPEAL BRIEF

Sir:

This is an Appeal from the decision dated June 1, 2004 of the Primary Examiner, finally rejecting the claims 1, 3-5, 7-8, 10-20, 22 and 23.

Real Party in Interest

The real party in interest is The Hoffman Group, Ltd., located at 125 South Jefferson Street, Suite 201, Green Bay, Wisconsin.

Related Appeals and Interferences

There are no appeals or interferences relates to the present application.

Status of Claims

Claims 1, 3-5, 7, 8, 12-20, 22-23 as originally filed on March 1, 2000.
Claims 10 and 11 as amended by an Amendment dated March 18, 2004 are on appeal and set forth in the Appendix. Claims 2, 6, 9 and 21 have been cancelled. Claims 24-28 have been withdrawn.

Status of Amendments

No amendments have been filed subsequent to the final rejection mailed June 1, 2004.

Summary of the Invention

The present invention relates to a laminate composite sheet comprising: a two-ply base layer comprised of a bottom ply and a top ply, wherein the bottom ply is comprised of unbleached cellulosic fibers and wherein the top ply is comprised of bleached or brightened cellulosic fibers. *(Pg. 7, lines 6-10)* A further layer is attached to the top ply with a layer of adhesive. *(Pg. 7, lines 6-10)* The further layer has a top and a bottom surface, and is selected from the group consisting of paper or film. *(Pg. 7, lines 10-11)* The layer of adhesive contains no pigment, and the top surface of the further layer has no coating. *(Pg. 7, line 11)* The unbleached cellulosic fibers can be selected from the group consisting of unbleached virgin kraft pulp and unbleached recycled pulp. *(Pg. 4, lines 14-15)*

The present invention relates to the composite sheet above wherein the bottom ply is be thicker than the top ply. *(Pg. 9, lines 21-22)* The present invention relates to the composite sheet above wherein the top ply has a brightness of above 60 ISO. *(Pg. 16, lines 17-18)* The present invention relates to the composite sheet above wherein the adhesive acts as a barrier for moisture, oil and odor. *(Pg. 6, lines 17-18)* The present invention relates to the composite sheet above wherein the paper sheet is a publication grade paper. *(Pg. 3, line 4)* The present invention relates to the composite sheet above wherein the paper sheet has a coating. *(Pg. 3, line 9)* The present invention relates to the composite sheet above wherein the coating is selected from the group consisting of clay, protein, starch, Titanium Dioxide, or mixtures thereof. *(Pg. 5, lines 4-6)*

The present invention relates to the composite sheet above wherein the film is a tear resistant film. *(Pg. 5, lines 14-15)* The present invention relates to the composite sheet of claim 1 wherein the film is reverse printed. *(Pg. 5, line 17)* The present invention relates to the composite sheet above wherein the film contains a pigment. *(Pg. 5, lines 3-4)*

The present invention relates to the composite sheet above wherein the composite sheet further includes an additional layer of paper or board attached to the bottom ply with a second adhesive layer. *(Pg. 7, lines 12-13)* The present invention relates to the composite sheet above wherein the additional layer is comprised of unbleached cellulosic fibers selected from the group consisting of unbleached virgin kraft pulp and unbleached recycled pulp. *(Pg. 17, lines 10-12)*

The present invention relates to the composite sheet above wherein the additional layer is a moisture absorbent layer. *(Pg. 11, lines 1-4)* The present invention relates to the composite sheet above wherein the second adhesive layer is not significantly absorbed by the moisture absorbent layer, and the second adhesive layer acts as a moisture barrier. *(Pg. 17, lines 15-17)* The present invention relates to the composite sheet above wherein the second adhesive layer is selected from the group consisting of hot melt glues or glues that are moisture and/or oil resistant. *(Pg. 11, lines 9-10)*

The present invention relates to the composite sheet above further comprising a second two-ply base layer comprised of a bottom ply and a top ply, wherein the bottom ply is comprised of unbleached cellulosic fibers and wherein the top ply is comprised of bleached or brightened cellulosic fibers. *(Pg. 7, lines 14-19)* The bottom ply of the second two-ply base layer is attached to the bottom ply of the two-ply base layer with a second layer of adhesive. *(Pg. 7, lines 14-19)*

The present invention relates to the composite sheet above further comprising a layer attached to the top ply of the second two ply base layer with a layer of adhesive, the layer having a top and a bottom surface. *(Pg. 7, lines 20-22)* The layer is selected from the group consisting of paper or film. *(Pg. 7, lines 20-22)* The layer of adhesive contains no pigment, and the top surface of the layer has no coating. *(Pg. 7, lines 20-22)*

The present invention relates to a laminated composite sheet comprising: a pair of two-ply base layers, comprised of a bottom ply and a top ply. The bottom ply is comprised of unbleached cellulosic fibers and the top ply is

comprised of bleached or brightened cellulosic fibers. An adhesive layer is disposed between the base layers, serving to adhere the bottom plies of each base layer together so that the top plies remain visible. *(Pg. 7, lines 14-19)*

Issues

Has the Examiner properly rejected claim 8 as being indefinite because the term "publication grade paper" is indefinite.

Has the Examiner properly rejected claims 1, 3, 4, 7, 8, 10, and 12-13 as being obvious over Cavagna, 4,898,752, in view of Peer, 4,254,173.

Has the Examiner properly rejected claim 5 as being obvious over Cavagna, in view of Peer, as applied to claims 1, 3, 4, 7, 8, 10, 12 and 13.

Has the Examiner properly rejected claim 11 as being obvious over Cavagna in view of Peer as applied above and further in view of Holder Jr., 3,982,056.

Has the Examiner properly rejected claim 14 as being obvious over Cavagna in view of Peer, as applied to claims 1,3,4,7,8,10,12 and 13.

Has the Examiner properly rejected claims 15 and 17-19 as being obvious over Cavagna in view of Peer as applied to claims 1,3,4,7,8,10,12 and 13 and further in view of Confer, 3,603,501.

Has the Examiner properly rejected claims 15-20, 22 and 23 as being obvious over Cavagna in view of Peer, as applied to claims 1,3,4,7,8,10,12 and 13 above, and further in view of Knudson, 4,913,773.

Grouping of Claims

The claims on appeal are grouped into claims 1,3,4,5,7,8,10,11,12,13,14; claims 15,16,17,18,19; claim 20; and claims 22 and 23. Claims 1, 3, 4, 5, 7, 8, 10, 11, 12, 13, 14 stand and fall together. Claims 15, 16, 17, 18 and 19 stand and fall together. Claim 20 stands and falls by itself. Claims 22 and 23 stand and fall together.

Argument

Has the Examiner properly rejected claim 8 as being indefinite.

Publication grade paper is defined on page five of the specification as label paper or other printing and writing grades of paper. Page 11 further defines publication grade paper as MG or MF or other printing, writing or label grades, or may have printed graphics. Further, Applicant has previously enclosed references that define the term and predate the prior date of the application.

Has the Examiner properly rejected claims 1, 3, 4, 7, 8, 10, and 12-13 as being obvious over Cavagna, 4,898,752, in view of Peer, 4,254,173.

Cavagna relates to a method for making coated and printed packaging material on a printing press. It is custom in the industry to finish at least one surface with a white coating, to permit printing of the naturally brown, rough surface of the unbleached board. One method has been to coat one surface of the board with a coating composition comprising latex, clay and titanium dioxide. In other cases, an outer thin layer of high-quality label paper or a plastic film have been laminated to one surface of the unbleached paper-board to provide a

printable surface. Containers of corrugated packages and single ply folding cartons employ white surfaced (clay coated) unbleached kraft board.

Peer relates to a composite material for secondary container packaging material for use in six pack can wraps, six pack bottle carriers, twelve pack carriers, comprising a composite of a paper material laminated to a plastic film. The plastic film provides tear resistance to the composite. Natural kraft paper and recycled paper are preferred. Preferred films permit reverse printing on their inner surface. Adhesives bond film to the paper. Film may be metallized to produce a foil effect.

Peer relates to an inner paper, outer decorative plastic film and adhesive layer between. A smooth white surface is coated to the carrier board with a white clay titanium dioxide-layer mixture. The white surface is added to permit decoration of the naturally brown, rough surface of the carrier board. In some cases, a white outer surface is provided through the lamination of an outer thin layer of high quality label paper to a thicker backing material. Peer teaches laminating a paper material, such as kraft paper or recycled board to a transparent film.

Claim 1 requires a two-ply base label comprised of a bottom ply and a top ply. The bottom ply is comprised of unbleached cellulosic fibers and the top ply is comprised of bleached or brightened cellulosic fibers. A layer of paper or film is attached to the top ply with a layer of adhesive. The adhesive contains no pigment and the top surface of the further layer has no coating.

Cavagna teaches an unbleached paper having a white paper or plastic attached to it. Peer teaches an unbleached paper having a film attached by an adhesive. Claim 1 requires a layer of paper or film attached to the top ply or bleached paper with a layer of adhesive. Therefore, the combination of Peer and Cavagna does not teach a two ply base layer having the layer of paper or film attached to the top ply. The combination of Peer and Cavagna if teaching any combination would teach to add the film to the unbleached paper which is not what is claimed in the claims of the present invention. Further, there is nothing taught in Cavagna which would suggest the need for a further layer to help with tear resistance. Therefore Claim 1 is not obvious over Cavagna in view of Peer.

Claim 3 requires that the unbleached cellulosic fibers are selected from unbleached virgin Kraft pulp and unbleached recycled pulp. Claim 3 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Claim 7 requires that the adhesive is a barrier for moisture, oil and odor. Claim 7 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Claim 4 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers

and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Claim 8 requires that the paper sheet is a publication grade. Claim 8 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Claim 10 requires that the paper sheet has a coating. Claim 10 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive. Further Cavagna in view of Peer does not teach that the paper sheet has a coating.

Claim 12 requires that the film is a tear resistant film. Claim 12 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Claim 13 requires that the film is reverse printed. Claim 13 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive.

Has the Examiner properly rejected claim 5 as being obvious over Cavagna, in view of Peer, as applied to claims 1, 3, 4, 7, 8, 10, 12 and 13.

Claim 5 requires that the top ply have a brightness of above 60ISO.

Claim 5 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers and a layer of paper or film attached to the top ply with a layer of adhesive.

Has the Examiner properly rejected claim 11 as being obvious over Cavagna in view of Peer as applied above and further in view of Holder Jr., 3,982,056.

For the reasons stated above for claim 1, claim 11 is not obvious over the prior art references.

Has the Examiner properly rejected claim 14 as being obvious over Cavagna in view of Peer, as applied to claims 1,3,4,7,8,10,12 and 13.

Claim 14 requires that the film contains a pigment. Claim 14 is not obvious over Cavagna in view of Peer because they do not disclose a two-ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers, a layer of paper or film attached to the top ply with a layer of adhesive.

Has the Examiner properly rejected claims 15 and 17-19 as being obvious over Cavagna in view of Peer as applied to claims 1,3,4,7,8,10,12 and 13 and further in view of Confer, 3,603,501.

Confer relates to a carton having tear strips for cans. The invention relates to an open end carton of six pack type having longitudinal slits on corner edges, one for each can. Carton blanks are made by laminating continuous label web and backing web wide enough for several blanks with longitudinal reinforcing strands between webs, and spaced laterally at margins and lines of division of master strip.

The carton is made from paperboard folded along appropriate lateral lines. The blank is a lamination of an outer thin layer of high quality label paper to receive desired printed matter and an inner considerably thicker layer of backing paper to provide strength and reasonable rigidity.

Claim 15 requires an additional layer of paper or board attached to the bottom ply with a second adhesive layer. Claim 15 is not obvious over Cavagna in view of Peer and further in view of Confer. None of these patents alone or in combination discloses a two ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive and an additional layer of paper or board attached to the bottom ply with a second adhesive. Further, there is nothing taught in Cavagna to add two additional layers. Therefore, claim 15 is not obvious over the prior art references.

Claim 17 requires that the additional layer of claim 15 is a moisture absorbent layer. Claim 17 is not obvious over Cavagna in view of Peer and further in view of Confer. None of these patents alone or in combination discloses a two ply base, the bottom ply comprising unbleached cellulosic fibers

and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive and an additional layer of paper or board attached to the bottom ply with a second adhesive.

Therefore, claim 17 is not obvious over the prior art references.

Claim 18 requires that the second adhesive layer is not significantly absorbed by the moisture absorbent layer and acts as a moisture barrier. Claim 18 is not obvious over Cavagna in view of Peer and further in view of Confer. None of these patents alone or in combination discloses a two ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive and an additional layer of paper or board attached to the bottom ply with a second adhesive. Therefore, claim 18 is not obvious over the prior art references.

Claim 19 requires that the second adhesive layer is selected from hot melt glues or glues that are moisture and/or oil resistant. Claim 19 is not obvious over Cavagna in view of Peer and further in view of Confer. None of these patents alone or in combination discloses a two ply base, the bottom ply comprising unbleached cellulosic fibers and the top ply comprising bleached or brightened cellulosic fibers; a layer of paper or film attached to the top ply with a layer of adhesive and an additional layer of paper or board attached to the bottom ply with a second adhesive. Cavagna teaches a paperboard coated with a thin paper layer. Therefore claim 19, is not obvious over the prior art references.

Has the Examiner properly rejected claims 15-20, 22 and 23 as being obvious over Cavagna in view of Peer, as applied to claims 1,3,4,7,8,10,12 and 13 above, and further in view of Knudson, 4,913,773.

Knudson relates to a method of producing a multi-ply paperboard comprising at least one ply high bulk fibers sandwiched between at least two plies of conventional papermaking fibers. High bulk fibers characterized by twists, kinks, and curls are produced by mechanical deformation without substantial fibrillation or breakage of the fibers.

The invention relates to a method for the manufacture of a multi-ply paperboard mat, and to a multi-ply paperboard not having premium fiber outer plies and an interior ply of high bulk fibers.

Claim 20 relates to a laminated sheet comprising a pair of two ply base layers each comprised of a bottom ply and a top ply. The bottom ply is comprised of unbleached cellulosic fibers and the top ply is comprised of bleached or brightened cellulosic fibers. The adhesive layer is disposed between the base layers, adhering the bottom plies of each base layer together so that the top plies remain visible.

Claim 20 is not obvious over Cavagna in view of Peer and further in view of Knudson. None of the prior art references alone or in combination disclose a pair of two-ply base layers each comprised of a bottom ply and a top ply wherein the bottom ply is comprised of unbleached cellulosic fibers and the top ply is comprised of bleached or brightened cellulosic fibers. The adhesive layer is disposed between the base layers adhering the bottom plies in each base layer

together. Knudson relates to a method of producing multiply paperboard wherein at least one ply of high bulk fibers is sandwiched between at least two plies of conventional papermaking fibers. The combination of Cavagna, Peer and Knudson does not make claim 20 obvious.

Claim 22 relates to the composite sheets of claim 1 further comprising a second two-ply base layer having a bottom ply and a top ply. The bottom ply is comprised of unbleached cellulosic fibers and the top ply is comprised of bleached or brightened cellulosic fibers. The bottom ply of the second two-ply base layer is attached to the bottom ply of the first two-ply base layer with a second layer of adhesive. For the reasons stated above for claim 20, claim 22 is not obvious over Cavagna in view of Peer and Knudson.

Claim 23 relates to the composite sheet of claim 22 and further comprises a layer attached to the top ply of the second two-ply base layer with a layer of adhesive. The layer has a top and bottom surface. The layer consists of paper or film. The layer of adhesive contains no pigment and the top surface of the layer has no coating. For the reasons stated above for claim 20, claim 23 is not obvious over Cavagna in view of Peer and Knudson.

Reversal of the Examiner and allowance of all the claims are accordingly respectfully requested.

Three copies of the Brief are enclosed herewith.

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Appendix

This listing of the claims will replace all prior versions, and listings of claims in the application.

In the Claims

1. (Original) A laminate composite sheet comprising:

a two-ply base layer comprised of a bottom ply and a top ply, wherein the bottom ply is comprised of unbleached cellulosic fibers and wherein the top ply is comprised of bleached or brightened cellulosic fibers;

a further layer attached to the top ply with a layer of adhesive; said further layer having a top and a bottom surface, said further layer selected from the group consisting of paper or film; said layer of adhesive containing no pigment, and said top surface of said further layer having no coating.
2. Cancelled
3. (Original) The composite sheet of claim 1 wherein said unbleached cellulosic fibers are selected from the group consisting of unbleached virgin kraft pulp and unbleached recycled pulp.
4. (Original) The composite sheet of claim 1 wherein said bottom ply is thicker than said top ply.
5. (Original) The composite sheet of claim 1 wherein the top ply has a brightness of above 60 ISO.
6. Cancelled
7. (Original) The composite sheet of claim 3 wherein the adhesive is a barrier for moisture, oil and odor.

8. (Original) The composite sheet of claim 1 wherein the paper sheet is a publication grade paper.
9. Cancelled
10. (Currently Amended) The composite sheet of claim [9] 1 wherein the paper sheet has a coating.
11. (Currently Amended) The composite sheet of claim 10 wherein the coating is selected from the group consisting of clay₁ [and] protein₁ [and/or] starch₁ [or] Titanium Dioxide, or mixtures thereof.
12. (Original) The composite sheet of claim 1 wherein said film is a tear resistant film.
13. (Original) The composite sheet of claim 1 wherein said film is reverse printed.
14. (Original) The composite sheet of claim 1 wherein said film contains a pigment.
15. (Original) The composite sheet of claim 1 further including an additional layer of paper or board attached to said bottom ply with a second adhesive layer.
16. (Original) The composite sheet of claim 15 wherein said additional layer is comprised of unbleached cellulosic fibers selected from the group consisting of unbleached virgin kraft pulp and unbleached recycled pulp.
17. (Original) The composite sheet of claim 15 wherein said additional layer is a moisture absorbent layer.
18. (Original) The composite sheet of claim 17 wherein the second adhesive layer is not significantly absorbed by the moisture absorbent layer, and the

second adhesive layer acts as a moisture barrier.

19. (Original) The composite sheet of claim 15 wherein said second adhesive layer is selected from the group consisting of hot melt glues or glues that are moisture and/or oil resistant.

20. (Original) A laminated composite sheet comprising:

a pair of two-ply base layers, comprised of a bottom ply and a top ply,
wherein the bottom ply is comprised of unbleached cellulosic fibers and
wherein the top ply is comprised of bleached or brightened cellulosic
fibers; and

an adhesive layer is disposed between the base layers, serving to adhere
the bottom plies of each base layer together so that the top plies remain
visible.

21. Cancelled

22. (Original) The composite sheet of claim 1 further comprising a second two-ply base layer comprised of a bottom ply and a top ply, wherein the bottom ply is comprised of unbleached cellulosic fibers and wherein the top ply is comprised of bleached or brightened cellulosic fibers;
said bottom ply of said second two-ply base layer attached to the bottom ply of said two-ply base layer with a second layer of adhesive.

23. (Original) The composite sheet of claim 22 further comprising a layer attached to the top ply of said second two ply base layer with a layer of adhesive; said layer having a top and a bottom surface, said layer selected from the group consisting of paper or film; said layer of adhesive containing no pigment, and said top surface of said layer having no coating.

24. (Withdrawn) A method for forming a laminated composite sheet comprising:
preparing a top ply comprised of bleached or brightened cellulosic fibers;
preparing a bottom ply comprised of unbleached cellulosic fibers;
pressing together in a press section of a papermachine said top ply and said bottom ply to form a two-ply base layer;
attaching a further layer with an adhesive to said top ply; said further layer selected from the group consisting of paper or film; said adhesive containing no pigment.

25. (Withdrawn) The method of claim 24 further comprising:
adding an additional layer of paper or board to said bottom ply with a second adhesive layer.

26. (Withdrawn) The method of claim 24 further comprising;
adding second two ply base layer: comprised of a bottom ply and a top ply;
wherein the bottom ply is comprised of unbleached cellulosic fibers and wherein
said top ply is comprised of bleached or brightened cellulosic fibers;
attaching said bottom ply of said second two-ply base layer to said bottom ply of
said two-ply base layer with a second layer of adhesive.

27. (Withdrawn) The method of claim 26 further comprising:
attaching to said top ply of said second two-ply base layer with a layer of
adhesive, a layer selected from the group consisting of paper or film; said
adhesive containing no pigment.

28. (Withdrawn) A method for forming a laminated composite sheet comprising:
preparing a pair of two ply base layers comprised of a bottom ply and a top ply;
preparing said top ply comprised of bleached or brightened cellulosic fibers
preparing a bottom ply comprised of unbleached cellulosic fibers;
pressing together in a press section of a papermachine said top ply and said
bottom ply to form a two-ply base layer;
attaching said base layers together with an adhesive;
said base layers being attached by said bottom plies so that the top plies remain
visible.